

# PATENT COOPERATION TREATY

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From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

HYMERS, Ronald, Robson  
BP INTERNATIONAL LIMITED  
Chertsey Road  
Sunbury-on-Thames  
Middx TW16 7LN  
GRANDE BRETAGNE

1 DEC 2005

WRITTEN OPINION OF THE  
INTERNATIONAL PRELIMINARY  
EXAMINING AUTHORITY

(PCT Rule 66)

OFFICIAL ACTION

Applicant's or agent's file reference BPX 10106		Date of mailing (day/month/year) 02.12.2005
International application No. PCT/GB2004/005137	International filing date (day/month/year) 08.12.2004	Priority date (day/month/year) 23.12.2003
International Patent Classification (IPC) or both national classification and IPC E21B43/10, E21B17/04		
Applicant BP EXPLORATION OPERATING COMPANY LIMITED et al		

- ☒ The written opinion established by the International Searching Authority:

☒ is ☐ is not considered to be a written opinion of the International Preliminary Examining Authority
- This second report contains indications relating to the following items:

  - ☒ Box No. I Basis of the opinion
  - ☐ Box No. II Priority
  - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - ☐ Box No. IV Lack of unity of invention
  - ☒ Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - ☐ Box No. VI Certain documents cited
  - ☐ Box No. VII Certain defects in the international application
  - ☐ Box No. VIII Certain observations on the international application
- The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(e).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.3 and 66.9.

**Also:** For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6. For an additional opportunity to submit amendments, see Rule 66.4.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
- The final date by which the international preliminary report on patentability (Chapter II of the PCT) must be established according to Rule 69.2 is: 23.04.2006

Name and mailing address of the international preliminary examining authority:



European Patent Office - P.B. 5818 Patentaan 2  
NL-2280 HW Rijswijk - Pays Bas  
Tel. +31 70 340 - 2040 Tlx: 31 651 epo nl  
Fax: +31 70 340 - 3016

Authorized Officer

Schouten, A

Telephone No. +31 70 340-4088



**WRITTEN OPINION OF THE INTERNATIONAL  
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International application No.  
PCT/GB2004/005137

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This opinion is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this opinion is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed")*:

**Description, Pages**

1-16

as originally filed

**Claims, Numbers**

1-10

received on 22.09.2005 with letter of 13.09.2003

**Drawings, Sheets**

1/16-16/16

as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

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**Box No. V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

**2. Citations and explanations:**

**see separate sheet**

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(SEPARATE SHEET)

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**Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

1) The documents US-A1-2003/0222409 and US-B1-6.171.351 were not cited in the international search report. Copies of the documents are appended hereto.

2) Reference is made to the following documents:

D1: GB-A-2.345.308

D2: US-A1-2003/0222409

D3: US-B1-6.171.351

3) The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of independent claims 1 and 8 does not involve an inventive step in the sense of Article 33(3) PCT.

4) The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and discloses on page 5, lines 17-24; page 9, lines 13-21; page 11, lines 8-20; page 15, lines 11-21 and in figures 1 and 2 (the references in parentheses applying to this document):

A method for connecting a first tubular element (14) and a second tubular element (12) comprising:

- locating a portion of the first tubular element (14) within a portion of the second tubular element (12),
- expanding (figure 2) the portion of the first tubular element (14) and/or compressing the portion of the second tubular element (12) to form a connection resulting from the interference between the external surface of the portion of the first tubular element (14) and the internal surface of the portion of the second tubular element (12).

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- in which, prior to assembly, one or both of the external surface of the portion of the first tubular element (14) and the internal surface of the portion of the second tubular element (12) is/are at least partially coated with hard angular material (20), wherein the hard angular material (20) is applied to the external surface of the portion of the first tubular element (14) and/or the internal surface of the portion of the second tubular element (12) to form protuberances on the surface.

The subject-matter of claim 1 therefore differs from this known method for connecting a first tubular element and a second tubular element in that the material is applied to the surface by plasma spraying.

The problem to be solved by the present invention may therefore be regarded as:  
providing an alternative way of depositing a material on the surface of a tubular element.

The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons: the mentioned feature (plasma spraying) has already been employed for the same purpose in a similar method for connecting a first tubular element and a second tubular element, see document D2, paragraphs [0047] and [0048]. It would be obvious to the person skilled in the art, namely when the same result is to be achieved, to apply this feature with corresponding effect to a method for connecting a first tubular element and a second tubular element according to document D1, thereby arriving at a method for connecting a first tubular element and a second tubular element according to claim 1.

Furthermore it is noted that the relatively hard material in the form of relatively small individual elements, such as sharps, grit or balls of carbide or some other relatively hard material as described in D1 (see page 11, lines 8-20) themselves form protuberances when placed on the surface of the tubular element.

5) The same reasoning applies, mutatis mutandis, to the subject-matter of the corresponding independent claim 8 which therefore is also considered not inventive.

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6) Dependent claims 2-7, 9 and 10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step for the following reasons:

Claims 2 and 3: see D3, column 4, lines 39-58, furthermore it is noted that using a foraminous mask is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

Claim 4: see D1, page 15, lines 11-21 and page 11, lines 17-18.

Claim 5, 6, 7: see D1, page 5, lines 17-24; page 9, lines 13-21; page 11, lines 8-20; page 15, lines 11-21 and figures 1 and 2.

Claim 9, 10: These features are merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.